Docket No. VTN 568

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: David C. Turner

Serial No.:09/727,874 **Group Art Unit:** 1772

Filed: December 1, 2000 **Examiner:** SIMONE, Catherine

Title: HIGH QUALITY OPTICAL MOLDS FOR USE IN CONTACT LENS PRODUCTION

ATTENTION: BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANTS' BRIEF (37 C.F.R. 1.192)

This is an appeal from the final rejection mailed February 17, 2004, a Notice of Appeal having been mailed on May 14, 2004.

The fees required under Section 1.17(f), and any required petition for extension of time for filing this brief and fees therefor, are addressed within the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate. (37 CFR 1.192(a))

This brief contains these items under the following headings, and in the order set forth below (37 CFR 1.192(c)):

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1. REAL PARTY INTEREST

The real party in interest of the subject patent application is Johnson & Johnson Visioncare, Inc, having a principal place of business at 7500 Centurion Parkway, Suite 100, Jacksonville FL 32256.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences pending.

3. STATUS OF CLAIMS

Claims 6-15 are pending. Claims 1 through 5 and 16 through 19 have been withdrawn.

Claim 6 stands rejected as unpatentable under 35 U.S.C. 103 over US 6,203,156 (Wu, et al).

Claims 7-11 stand rejected as unpatentable under 35 U.S.C. 103 over Wu, et al. in view of EP 940,693 (Vanderlaan).

Claims 12-13 stand rejected as unpatentable under 35 U.S.C. 103 over Wu, et al. in view of US 6,367,929 (Maiden, et al.).

Claims 14-15 stand rejected as unpatentable under 35 U.S.C. 103 over Wu, et al. in view of US 5,539,016 (Kunzler, et al.).

4. STATUS OF AMENDMENTS

The claims were amended on May 16, 2003. All amendments have been entered.

5. SUMMARY OF INVENTION

The present invention as recited in the pending claims is related to a silicone hydrogel contact lens, comprising at least one surface wherein periodic structures on the surface have a periodicity (distance from one periodic structure to the next) of less than about 3 μm and an amplitude (height or depth) of less than about 4 nm RMS. Periodic structures are intentionally or unintentionally created deviations (depressions or elevations) from the surface.

6. STATEMENT OF ISSUES

Whether claim 6 is patentable under 35 U.S.C. 103 over US 6,203,156 (Wu, et al).

Whether claims 7-11 are patentable under 35 U.S.C. 103 over Wu, et al. in view of EP 940,693 (Vanderlaan).

Whether claims 12-13 are patentable under 35 U.S.C. 103 over Wu, et al. in view of US 6,367,929 (Maiden, et al.).

Whether claims 14-15 are patentable under 35 U.S.C. 103 over Wu, et al. in view of US 5,539,016 (Kunzler, et al.).

7. GROUPING OF CLAIMS

For the purpose of the appeal, the claims stand or fall together.

8. ARGUMENTS

Claim 6 is patentable under 35 U.S.C. 103 over US 6,203,156 (Wu, et al).

Claim 1 of the present invention recites "a silicone hydrogel contact lens, comprising at least one surface wherein periodic structures on the surface are of a periodicity of less than about 3 μm and an amplitude of less than about 4 nm RMS."

The periodic structures in Wu have neither the periodicity or the amplitude recited in claim 6. Wu discloses contact lenses having identifying marks (or holes) that are readily visible to the eye. The bottom of the holes have a maximum depth range (or amplitude) which varies based upon the width of the hole. At the most shallow, the identifying marks or holes have a depth (amplitude) from 0.5 microns (500 nm) to 35 microns (35,000 nm). These amplitudes are 100 to 10,000 times deeper than the amplitude recited in claim 6 of the present application.

With respect to periodicity Wu et al. disclose that the holes "are preferably spaced so that the center-to-center distance between the holes is between from 5 to 300 microns, more preferably between from 50-250 microns and most preferably between from 100 to 175 microns" (column 5, lines 39-43). The lowest periodicity disclosed by Wu et al. (5 microns) is still nearly twice as large as the periodicity (3μm). There is absolutely no suggestion in Wu et al. that the periodicity could or should be decreased. The only suggestion to do so is from the present application.

Table 1, below compares the periodicity and amplitude of the periodic structures disclosed in Wu et al. to those claimed in the present invention.

	Amplitude (nm)	Periodicity (microns)
Wu et al.	500 - 35,000	5-300
Claim 6	Less than 4	Less than 3

Clearly claim 6 is patentable in view of Wu et al.

Examiner has maintained the rejection stating that "Wu et al. discloses a surface roughness less than 10 microns RMS (10000 nm RMS), more preferably less than about 3 microns RMS (3000 nm RMS) and most preferably less than 0.5 microns RMS (500nm RMS), which overlaps with the claimed range of less than about 4 nm RMS." Page 3, 6/24/2004 Advisory Action. However, this text refers to the surface ***of the periodic structure*** and not of the

contact lens. The text cited by Examiner is located at column 2, lines 59- 64 of Wu et al. and reads:

> To improve the focusing power of the concave surfaces of the mark, it is preferred that the ***concave surface of the identifying mark*** be smooth, that is, the surface preferably has a surface roughness less than 10 microns RMS, more preferably less than 3 microns RMS and most preferably less than 0.5 microns 9500 nm RMS). [emphasis added]

Clearly the above passage of Wu et al. further defines the holes (which have amplitudes and periodicities far greater than those recited in the present claims) and does not suggest that any other part of the lens surface other than the surface of the hole, have a specific surface roughness. Moreover, reading the above passage in context with the remainder of Wu et al. it is clear that the above passage relates only to the surface of the holes, and not the lens.

> "[F]ocusing of the light reflected off the concave surface or surfaces of the holes makes the identifying mark more visible than if the surface of the identifying mark were flat, or randomly roughened." Column 2, lines 51-54.

Thus, the surface roughness disclosed in Wu is meant to augment a visible artifact on the lens. Unlike Wu et al. the amplitude and periodicity recited in the present application is meant to minimize and not magnify the visual impact of the defects (see page 1, lines 21-28).

Wu et al. does not suggest the periodicity and amplitude recited in claim 6.

Claims 7-11 are patentable under 35 U.S.C. 103 over Wu, et al. in view of EP 940,693 (Vanderlaan).

Claims 12-13 are patentable under 35 U.S.C. 103 over Wu, et al. in view of US 6,367,929 (Maiden, et al.).

Claims 14-15 are patentable under 35 U.S.C. 103 over Wu, et al. in view of US 5,539,016 (Kunzler, et al.).6 is patentable under 35 U.S.C. 103 over Wu, et al.

The remaining references are silent with respect to the periodicity or amplitude of periodic structures on the surface of a contact lens. Accordingly, because Wu et al. discloses periodic structures having neither the periodicity or amplitude, claims 6-15 are patentable.

Reversal of the rejections is respectfully requested.

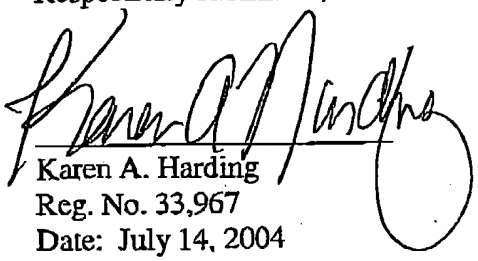
8.5 CONCLUSION

For the foregoing reasons, the reversal of the rejections relating to claims 6 through 15 are respectfully requested.

9. APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

(See attached)

Respectfully submitted,



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APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

6. A silicone hydrogel contact lens, comprising at least one surface wherein periodic structures on the surface are of a periodicity of less than about 3 μm and an amplitude of less than about 4 nm RMS.

7. The silicone hydrogel lens of claim 6, wherein the at least one surface further comprises a hydrophilic coating.

8. The silicone hydrogel lens of claim 7, wherein the hydrophilic coating is selected from the group consisting of poly(acrylic acid), poly(methacrylic acid), poly(dimeth)acrylamide, poly(acrylamide), or poly(hydroxyethylmethacrylate).

9. The silicone hydrogel lens of claim 7, wherein the hydrophilic coating is poly(acrylic acid).

10. The silicone hydrogel lens of claim 7, wherein the hydrophilic coating is poly(acrylamide).

11. The silicone hydrogel lens of claim 7, wherein the hydrophilic coating is poly(hydroxyethylmethacrylate).

12. The silicone hydrogel lens of claim 6, wherein the silicone hydrogel comprises a Group Transfer Polymerization product of a reaction mixture comprising 2-hydroxyethyl methacrylate, methyl methacrylate, methacryloxypropyltris(trimethylsiloxy)silane, and mono-methacryloxypropyl terminated mono-butyl terminated polydimethylsiloxane and a polymerizable mixture comprising a Si7-9 monomethacryloxy terminated polydimethyl siloxane; a methacryloxypropyl tris(trimethyl siloxy) silane; N,N-dimethyl acrylamide; 2-hydroxy ethyl methacrylate; and tetraethyleneglycol dimethacrylate.

13. The silicone hydrogel lens of claim 7, wherein the silicone hydrogel comprises a Group Transfer Polymerization product of a reaction mixture comprising 2-hydroxyethyl methacrylate, methyl methacrylate, methacryloxypropyltris(trimethylsiloxy)silane, and mono-methacryloxypropyl terminated mono-butyl terminated polydimethylsiloxane and a polymerizable mixture comprising a Si7-9 monomethacryloxy terminated polydimethyl siloxane; a methacryloxypropyl tris(trimethyl siloxy) silane; N,N-dimethyl acrylamide; 2-hydroxy ethyl methacrylate; and tetraethyleneglycol dimethacrylate.

14. The silicone hydrogel lens of claim 6, wherein the silicone hydrogel comprises a fluorosiloxane hydrogel.

15. The silicone hydrogel lens of claim 7, wherein the silicone hydrogel comprises a fluorosiloxane hydrogel.